

REMARKS

The claims now pending are claims 3, 5, 16, 18, 20, 22, 24, 26 and 27.

35 U.S.C. § 103

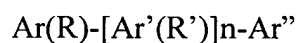
The Examiner has rejected claims 3, 5, 16, 18, 20, 22, 24, 26 and 27 under 35 U.S.C. § 103(a), as being unpatentable over Kostusyk et al. (US 4,880,553). The applicants respectfully traverse this rejection.

The Examiner has rejected the claims based on Kostusyk, et. al., a patent describing combinations of alkylated naphthalenes with mineral lubricating oils. In order to establish a *prima facie* case of obviousness, the cited references must teach or suggest all of the limitations of the claims. Applicants assert that Kostusyk teaches alkylated naphthalenes that are structurally distinct from those of the present invention and teaches their use at substantially lower concentrations than in the present invention. The details of these differences are outlined below.

1) Alkylated Naphthalene Structure

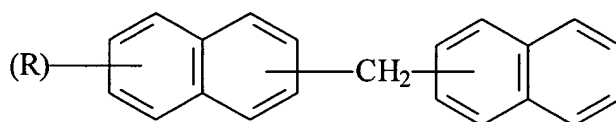
The compounds of Kostusyk, et. al., are structurally different from, do not have the same physical properties as, and do not have the same performance characteristics as the alkylated naphthalenes of the claimed invention. The compounds of Kostusyk, et. al. are of the general structure shown in Figure 1 below.

Figure 1



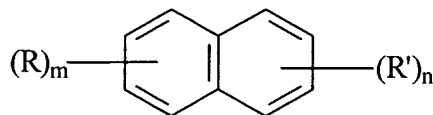
According to Kostusyk, the key performance attribute (pour point reduction) can only be obtained by linking aromatic groups together with methylene bridges ($-\text{CH}_2-$) to form oligomeric and/or polymeric aromatic compounds. See column 2, lines 32-37 where it is stated that “(R) and (R’) are independently an alkylene group containing 1-100 carbon atoms with the proviso that at least one of (R) or (R’) is CH_2 , and n is 0 to about 1000 or more; with the proviso that if n is 0, then (R) is CH_2 ...”. Thus, according to Kostusyk, et. al., the linking of the aromatic groups is a requirement of the invention. Therefore, a minimum structure for the alkylated naphthalenes of Kostusyk, et. al. would have the basic framework shown below in Figure 2.

Figure 2



The alkylated naphthalenes of the present invention contain only one aromatic group and the aromatic group is specifically naphthalene substituted by 2 or greater alkyl groups as represented by the structure in Figure 3 given below which is also in the original application.

Figure 3



2) Concentration of the Alkylated Naphthalenes in the Composition

It is stated in column 2, line 65-68 of Kostusyk, et. al. that “It is the primary object of the present invention to provide a novel class of compositions which when added to a hydrocarbon oil in relatively small amounts will act as pour point depressants.” The authors later define “relatively small amounts” in the specification in column 6 lines 40-48, stating that a maximum 50% concentrate with additives would be utilized at a treat rate in oil of 0.0025-4%,

and preferably 0.05-2%. This would give a treat rate of the methylene bridged oligomeric/polymeric alkylated naphthalene of 0.00125-2%; preferably 0.025-1%. The alkylated naphthalene/ Group III base oil compositions of the present invention require higher treat levels of the alkylated naphthalenes to provide the surprising thermo-oxidative stability observed and reported in the application. See claim 3 of the present invention which states “A combination comprising a mixture of 50 weight percent to about 90 weight percent of Group III base oils with the balance being an alkylated naphthalene, ...” Thus the minimum concentration required to observe the surprising thermo-oxidative stability of the novel compositions of the present invention is 10 weight percent alkylated naphthalene, substantially greater than the maximum of 2% taught by Kostusyk. Kostusyk is actually teaching away from the present invention. In addition, while Kostusyk provides no specific information on the physical properties of the alkylated naphthalenes of their invention, those skilled in the art would predict that such compounds would have extremely high viscosities that would negatively impact the overall viscometrics of a lubricant composition if used at treat levels higher than those recommended. In fact, the addition of 10 weight percent of the oligomeric/polymeric alkylated naphthalenes of Kostusyk would have dire consequences on the performance of the compositions in the intended application as a lubricant.

The examiner also noted that Kostusyk does not disclose that a Group III base oil is an oil of lubricating viscosity and cites the applicants specification as a source of this information. Applicants point out that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. MPEP 2143, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Because Kostusyk discloses alkylated naphthalenes that are of a different structure and used at substantially lower concentrations than the alkylated naphthalenes, Applicants assert that the Examiner has not established a *prima facie* case of obviousness and respectfully requests reconsideration and withdrawal of the rejection of claims 3, 5, 16, 18, 20, 22, 24, 26 and 27 and allowance of the application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **13-4500**, Order No. 0444-4083US1. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **13-4500**, Order No. 0444-4083US1. A
DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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Dated: March 21, 2006

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